



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,174	02/06/2002	Robert Bruce Ganton	UTL 00050	1304

7590 12/08/2004
Kyocera Wireless Corp.
Attn: Patent Department
PO Box 928289
San Diego, CA 92192-8289

EXAMINER

PEREZ, JULIO R

ART UNIT	PAPER NUMBER
----------	--------------

2681

DATE MAILED: 12/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/072,174

Applicant(s)

GANTON, ROBERT BRUCE

Examiner

Julio R Perez

Art Unit

2681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18 and 35 is/are allowed.
- 6) ☐ Claim(s) 1-6, 15, 16, 19-23 and 33 is/are rejected.
- 7) ☒ Claim(s) 7-14, 17, 24-32 and 34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 6, 15-16, 19-21, 23, 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Plasson et al. (679568).

Regarding claim 1, Plasson discloses in a personal area network (PAN), a method for actively evaluating and adjusting device energy consumption, the method comprising: polling devices in the PAN to determine respective energy metrics (col. 7, lines 45-67; col. 8, lines 12-38, prior to a establishment for a communication between two devices, the master and the slaves are involved into a first stage called enumeration, that is, a process in which both devices mutually handshake each other and initiate a linkage; the master detects the presence of a peripheral and the two exchange identification information); and, establishing network communications between devices using the energy metrics (col. 7, lines 45-67; col. 8, lines 12-38, after each device polls each other's identification to recognize each other, therein establish a connection between them).

Regarding claim 2, Plasson discloses wherein establishing network communications between devices using the energy metrics includes minimizing energy consumption for devices with low energy metrics (col. 11, lines 57-67; col. 12, lines 1-47, in the PAN configuration, in the case of a Bluetooth environment, the device that acts as a master is typically the device that has enough battery power, in fact relative more than the other devices in the configuration, and acts upon periodically verifying for the others to check if they are located at range. The other devices are set in a lower power mode conventionally; saving, in this way, power consumption).

Regarding claim 3, Plasson discloses wherein polling devices in the personal area network to determine respective energy metrics includes polling devices in a Bluetooth wireless communications network (col. 6, lines 2-15; col. 7, lines 25-44; col. 10, lines 56-65; col. 11, lines 29-35, the system works in a Bluetooth wireless configuration, where polling of devices is performed).

Regarding claim 4, Plasson discloses wherein polling devices in a Bluetooth wireless communications network includes establishing a piconet with one device functioning as a master device and at least one other device functioning as a slave device (col. 7, lines 61-67; col. 8, lines 1-5; Figs. 3A-3B, PAN configuration includes a group of devices connected in a Piconet configuration, where one unit acts as a master and the other(s) act as slave(s)); and, wherein establishing network communications between devices using the energy metrics includes the master device establishing network communications rules between devices to optimize device battery life (col. 7, lines 61-67; col. 8, lines 1-5; col. 11, lines 29-35, 57-67; col. 12, lines 1-8, the master

detects the range at which the other devices are located in order to determine if communication is permitted and determining if communication is necessary, while the other devices' power is in the power safe mode, resulting in this way, the saving of the power usage on the device units).

Regarding claim 6, Plasson discloses wherein establishing a piconet with one device functioning as a master device and at least one other device functioning as a slave device includes: the slave devices supplying energy metric data to the master device, the device energy metric data including available device data for those slave devices unable to support the energy metric exchange (col. 12, lines 66-67; col. 13, lines 1-59, the master device possesses storage capabilities to store data regarding the characteristics of the slave devices).

Regarding claim 15, Plasson discloses wherein polling devices in a Bluetooth wireless communications network includes establishing a scatternet including at least two piconets; and, wherein establishing network communications between devices using the energy metrics includes establishing network communications between devices in response to negotiations between the Piconets (col. 7, lines 61-67; col. 8, lines 1-38, the devices grouped in piconets establish communications among themselves as they are at close range of each other and meeting their characteristic criteria)

Regarding claim 16, Plasson discloses wherein establishing a piconet with one device functioning as a master device and at least one other device functioning as a slave device includes establishing an ad hoc point-to-multipoint piconet and an ad hoc

point-to-point piconet (col. 7, lines 61-67; col. 8, lines 1-22; Figs. 3A-3B, the system performs a piconet configuration where one device acts as a master and other (s) act as slave(s)).

Regarding claim 19, Plasson discloses a personal area network, a system for actively evaluating and adjusting device energy consumption, the system comprising: a plurality of devices communicating in a wireless communications network (col. 7, lines 62-67; col. 8, lines 122, the system configures several devices communicating wirelessly); and, wherein a first device polls other devices to determine respective energy metrics, and establishes network communications between devices in response to determining the energy metrics (col. 7, lines 62-67; col. 8, lines 122, 28-67; col. 11, lines 29-35, 57-67; col. 12, lines 1-46, the master detects the proximity of the slave devices to decide whether communication must be established, therein determining certain characteristics of the slave devices prior to communication and at the same time to save energy when not transmitting data).

Regarding claim 20, Plasson discloses battery capacity and power-efficient or normal power demands as disclosed at col. 11, lines 57-67 and col. 12, lines 9-46, which read on the claimed "wherein the first device establishes network communications between devices to minimizing energy consumption for devices with low energy metrics".

Regarding claim 21, Plasson discloses wherein the plurality of devices communicate in a Bluetooth wireless communications piconet; and, wherein the first device functions as a master device to establish network communications rules with at

least one slave device (col. 7, lines 62-67; col. 8, lines 122, 28-67; col.11, lines 29-35, 57-67; col. 12, lines 1-46, the master detects the proximity of the slave devices to decide whether communication must be established, therein determining certain characteristics of the slave devices prior to communication and at the same time to save energy when not transmitting data).

Regarding claim 23, Plasson discloses wherein the master device polls the slave devices to receive slave device energy metric data; and, wherein device energy metric data includes available device data for those slave devices unable to support the energy metric exchange (col. 12, lines 66-67; col. 13, lines 1-59, the master device possesses storage capabilities to store data regarding the characteristics of the slave devices).

Regarding claim 33, Plasson discloses wherein the plurality of devices communicating in a Bluetooth wireless communications piconet includes at least two piconets communicating to form a scatternet; and, wherein energy consumption rules are supplied in response to negotiations between the two piconets (col. 8, lines 6-22).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 22, are rejected under 35 U.S.C. 103(a) as being unpatentable over Plasson (6795688) in view of Kumar (6640268).

Regarding claims 5,22, Plasson discloses wherein establishing a piconet with one device functioning as a master device and at least one other device functioning as a slave device includes: and, the master device retrieving device energy metric data from memory in response to the slave device identification data, the device energy metric data including available device data for those slave devices unable to support the energy metric exchange (col. 12, lines 66-67; col. 13, lines 1-59, the master device possesses storage capabilities to store data regarding the characteristics of the slave devices).

Plasson does not explicitly disclose the slave devices supplying identification data to the master device.

However, Kumar teaches identification mechanism to allow peripherals, slave units, to provide their respective addresses and identifiers before allowing any communication between devices (col. 5, lines, 5-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the communication system as taught by Plasson by implementing the system with identification purposes because it would provide Plasson 's system with the enhanced capability of identifying devices before connection in order to make the communication between devices more secure and efficient.

Allowable Subject Matter

5. Claims 7-14, 17, 24-32, 34 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to disclose establishing communication rules in response to device battery charge status and device priority of operation. Furthermore, the prior art fails to teach determining a network battery ratio for comparing device battery charge status, device priority of operation, and the combination of the link energy metric and the operational energy metric.

6. Claims 18, 35 are allowed.

Prior art has not been found that suggests or renders obvious the limitations of independent claims 18 and 35 disclosing the master device modifying a link state between devices to optimize device battery life in response to the battery charge status, the device priority of operation, and the link energy metrics and further wherein link states include the

combination of device scan rate, device mode setting, and the function of a device as a slave or master in the piconet.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the art with respect to systems for configuring a personal area network and power optimization.

US Pat. No. 6671525 to Allen et al.	Beacon assisted for communications protocol
US Pat. No. 6104913 to McAllister	Personal area network for phone services

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio R Perez whose telephone number is (703) 305-8637. The examiner can normally be reached on 7:00 - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 703-308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JP
12/2/04


DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600